

**Notice of Allowability**

Application No.

09/697,025

Examiner

Gordon J. Stock

Applicant(s)

NIKOONAHAD ET AL.

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/13/05.
2. ☒ The allowed claim(s) is/are 1-2, 4-12, 14-17, 19-33, 35-60, 62, 63 and 144-175.
3. ☒ The drawings filed on ~~06/13/05~~ 13 June 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
Gregory J. Tansley, Jr.  
Supervisory Patent Examiner

## DETAILED ACTION

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Hsue on 8/15/05.

Claims 31, 41-44, 48-50, 57-60 and 171 will be amended to overcome a possible 35 U.S.C. 112 (second paragraph) rejection. The limitation comprising "less than about 10 milliseconds" will now read "less than 10 milliseconds".

Cancel claims 64-143 as being drawn to claims non-elected without traverse.

Amended Claims:

31. (Currently Amended) The apparatus of claim 16, said detectors having an integration time less than ~~about~~ 10 milliseconds.

41. (Currently Amended) The apparatus of claim 37, said one or more detectors having an integration time less than ~~about~~ 10 milliseconds.

42. (Currently Amended) The apparatus of claim 37, said source providing pulses of radiation illuminating the two structures, wherein at least one of the pulses has a pulse width less than ~~about~~ 10 milliseconds.

43. (Currently Amended) The apparatus of claim 42, said source comprising a mechanical shutter with aperture time of less than ~~about~~ 10 milliseconds.

44. (Currently Amended) The apparatus of claim 37, further comprising a mechanical shutter with aperture time of less than ~~about~~ 10 milliseconds in an optical path between the structures and the one or more detectors.

48. (Currently Amended) An imaging apparatus for detecting misalignment of two structures placed next to each other with respect to a reference plane, comprising:

- a source providing a beam of radiation illuminating the two structures;
- one or more detectors having an integration time less than ~~about~~ 10 milliseconds;
- optics collecting radiation from the two structures and directing the collected radiation to form images of at least portions of the two structures on the one or more detectors which provide outputs, wherein the image of the portion(s) of one of the two structures is substantially distinct from the image of the portion(s) of the remaining one of the two structures; and
- a processor determining a misalignment between the structures from outputs of the detectors.

49. (Currently Amended) An imaging apparatus for detecting misalignment of two structures placed next to each other with respect to a reference plane, comprising:

a source providing pulses of radiation illuminating the two structures, wherein at least one of the pulses has a pulse width less than ~~about~~ 10 milliseconds;

one or more detectors;

optics collecting radiation from the two structures and directing the collected radiation to form images of at least portions of the two structures on the one or more detectors which provide outputs, wherein the image of the portion(s) of one of the two structures is substantially distinct from the image of the portion(s) of the remaining one of the two structures; and

a processor determining a misalignment between the structures from outputs of the detectors.

50. (Currently Amended) An imaging apparatus for detecting misalignment of two structures placed next to each other with respect to a reference plane, comprising:

a source providing pulses of radiation illuminating the two structures, wherein at least one of the pulses has a pulse width less than ~~about~~ 10 milliseconds;

one or more detectors;

optics collecting radiation from the two structures and directing the collected radiation to the one or more detectors which provide outputs; and

a processor determining a misalignment between the structures from outputs of the detectors, said source comprising a mechanical shutter with aperture time less than about 10 milliseconds.

57. (Currently Amended) The apparatus of claim 51, wherein said one or more detectors have an integration time less than about 10 milliseconds.

58. (Currently Amended) The apparatus of claim 51, said source providing pulses of radiation illuminating the two structures, wherein at least one of the pulses has a pulse width less than about 10 milliseconds.

59. (Currently Amended) The apparatus of claim 58, said source comprising a mechanical shutter with aperture time of less than about 10 milliseconds.

60. (Currently Amended) The apparatus of claim 51, further comprising a mechanical shutter with aperture time of less than about 10 milliseconds in an optical path between the structures and the one or more detectors.

64. - 143. (Cancelled).

171. (Currently Amended) The apparatus of claim 156, said detectors having an integration time less than about 10 milliseconds.

***Allowable Subject Matter***

Claims 1-2, 4-12, 14-17, 19-33, 35-60, 62, 63 and 144-175 are allowed.

The following is an examiner's statement of reasons for allowance:

With regard to claims 1-2, 4-12, 14-17, 19-33, 35-47, 51-60, 62-63 and 144-175, see Office Action dated March 10, 2005 with respect to reasons for allowance under Allowable Subject Matter.

With regard to claim 48, the prior art of record, taken alone or in combination, fails to disclose or render obvious one or more detectors having an integration time less than 10 milliseconds and optics collecting radiation from the two structures and directing the collected radiation to form images of at least portions of the two structures on the one or more detectors which provide outputs, wherein the image of the portion(s) of one of the two structures is substantially distinct from the image of the portion(s) of the remaining one of the two structures, in combination with the rest of the limitations of claim.

With regard to claim 49, the prior art of record, taken alone or in combination, fails to disclose or render obvious a source providing pulses of radiation illuminating the two structures, wherein at least one of the pulses has a pulse width less than 10 milliseconds and optics collecting radiation from the two structures and directing the collected radiation to form images of at least portions of the two structures on the one or more detectors which provide outputs, wherein the image of the portion(s) of one of the two structures is substantially distinct from the

image of the portion(s) of the remaining one of the two structures, in combination with the rest of the limitations of claim.

With regard to claim 50, the prior art of record, taken alone or in combination, fails to disclose or render obvious a source providing pulses of radiation illuminating the two structures, wherein at least one of the pulses has a pulse width less than 10 milliseconds and said source comprising a mechanical shutter with aperture time of less than 10 milliseconds, in combination with the rest of the limitations of claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed June 13, 2005, with respect to the rejection of the claims under 35 U.S.C. 103(a), have been fully considered and are persuasive. In view of the arguments and the amendments of the claims the rejection under 35 U.S.C. 103(a) of claims 48-50 have been withdrawn.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is 571-272-2431. The examiner can normally be reached on Monday-Friday, 10 a.m. - 6:30 p.m.

Art Unit: 2877

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

G.S.  
8/15/05

  
Gregory J. Toatley, Jr.  
Supervisory Patent Examiner  
Group Art Unit 2877  
8/15/05